

IN THE SPECIFICATION:

Replace the paragraph beginning at page 3, line 6, with the following rewritten paragraph:

--The invention also relates to a living body-supporting implant, characterized by the fact that it comprises or consists of the humanized biomaterial ~~according to any one of claims 1 to 3 as described above~~, and is preferably structured under the form of scaffold, tissue-supporting sponges, bone or cartilage.--

Replace the paragraph beginning at page 3, line 32, with the following rewritten paragraph:

--A process for the preparation of a humanized biomaterial of the invention comprises the following steps:

- preparation of the porous biomaterial structured in form of bones, cartilage,
- preparation of macrophages from blood monocytes,
- immersion of the biomaterial in a physiologic solution appropriate for the culture of macrophages which are added afterwards (ex. : phosphate buffered saline, medium such as RPMI, IMDM, AIMV),
- addition of the macrophage to the solution under conditions enabling binding to the biomaterial and particularly for 1 to 20 h. at 37°C, 5 % CO2 and [[5 %]] 95 % air,

- washing of the biomaterial and conservation until use in physiologic medium.--

Replace the paragraph beginning at page 4, line 9, with the following rewritten paragraph:

--A process for the preparation of a living body-supporting implant of the invention comprises the following steps:

- preparation of a customized porous implant or scaffold composed of bio-compatible material, ~~according to any one of claims 1 to 3 as~~ described above,
- preparation of macrophages from blood monocytes of the patient needing the customized implant of biomaterial,
- co-culture of macrophages and the implant in adequate medium under conditions enabling penetration and adherence to the biomaterial, in particular at 37°C, 5% CO2 in hydrophobic bags or containers until grafting the implant.--

Replace the paragraph beginning at page 4, line 33, with the following rewritten paragraph:

--The key factors secreted by macrophages supporting tissue integration regeneration and growth of mesenchymal cells are : IGF1 and TGFs, but also PDGF, bFGF, MDGF, [[GM, CSF]] GM-CSF, NAF, IL-8, TNF, angiogenin and angiogenic factors. These

growth factors allow also the development of all the steps required for angiogenesis, allowing neovascularisation and reconstitution of blood microcapillaries around the grafted biomaterial.--